AMENDMENTS

To the Claims:

Please amend claims as follows.

Claim 1. (currently amended) A cleaning method used in an interconnect process, comprising the steps of:

providing a substrate having a conductive layer and a dielectric layer formed thereon, wherein the conductive layer is formed over the substrate and the dielectric layer is formed over the conductive layer;

patterning the dielectric layer to form an opening by forming a patterned photoresist layer on the dielectric layer, wherein a portion of the conductive layer is exposed by the opening;

removing the patterned photoresist layer; and

~~removing a portion of the dielectric layer to form an opening in the dielectric layer to expose a portion of the conductive layer; and~~

cleaning the opening after removing the patterned photoresist layer by ~~in the dielectric layer~~ using a mixture containing sulfuric acid and hydrogen peroxide in water.

Claim 2. (original) The cleaning method of claim 1, wherein the concentration of the sulfuric acid in the mixture is between 0.1M to 0.2M.

Claim 3. (original) The cleaning method of claim 1, wherein the concentration of the hydrogen peroxide in the mixture is between 1.1M to 2.0M.

Claim 4. (original) The cleaning method of claim 1, wherein the opening is cleaned using the mixture containing sulfuric acid and hydrogen peroxide heated to a temperature between 30°C to 40°C.

Claim 5. (original) The cleaning method of claim 1, wherein the opening is cleaned using the mixture containing sulfuric acid and hydrogen peroxide for a duration of about 30 to 90 seconds.

Claim 6. (original) The cleaning method of claim 1, wherein the opening is a contact opening or a dual damascene opening.

Claim 7. (original) The cleaning method of claim 1, wherein the conductive layer is a composite layer comprising a titanium/titanium nitride layer, an aluminum/copper alloy layer and another titanium/titanium nitride layer.

Claims 8-15 (cancelled)

Customer No.: 31561
Application No.: 10/707,081
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Claim 1. (currently amended) A cleaning method used in an interconnect process, comprising the steps of:

providing a substrate having a conductive layer and a dielectric layer formed thereon, wherein the conductive layer is formed over the substrate and the dielectric layer is formed over the conductive layer;

patterning the dielectric layer to form an opening by forming a patterned photoresist layer on the dielectric layer, wherein a portion of the conductive layer is exposed by the opening;

removing the patterned photoresist layer; and

~~removing a portion of the dielectric layer to form an opening in the dielectric layer to expose a portion of the conductive layer; and~~

cleaning the opening after removing the patterned photoresist layer by ~~in the dielectric layer~~ using a mixture containing sulfuric acid and hydrogen peroxide in water.

Claim 2. (original) The cleaning method of claim 1, wherein the concentration of the sulfuric acid in the mixture is between 0.1M to 0.2M.

Claim 3. (original) The cleaning method of claim 1, wherein the concentration of the hydrogen peroxide in the mixture is between 1.1M to 2.0M.

Claim 4. (original) The cleaning method of claim 1, wherein the opening is cleaned using the mixture containing sulfuric acid and hydrogen peroxide heated to a temperature between 30°C to 40°C.

Claim 5. (original) The cleaning method of claim 1, wherein the opening is cleaned using the mixture containing sulfuric acid and hydrogen peroxide for a duration of about 30 to 90 seconds.

Claim 6. (original) The cleaning method of claim 1, wherein the opening is a contact opening or a dual damascene opening.

Claim 7. (original) The cleaning method of claim 1, wherein the conductive layer is a composite layer comprising a titanium/titanium nitride layer, an aluminum/copper alloy layer and another titanium/titanium nitride layer.

Claims 8-15 (cancelled)